

little-explored interior of Peru. Several years ago F. Martin Brown wrote: "Woytkowski had been a hero in the domain of natural science, about whom no books were written so far" The present account, in the style of a narrative by Woytkowski, actually has been written by M. Salomea Wielopolska, who was able to assemble not only his letters, photographs and notes, but also obtain additional information from entomologists who had close contacts with Woytkowski. Consequently, the account is vivid, often frightening, describing the dangers and deprivations of one of the most devoted collectors of recent years. The book ends with an epilogue and a chronological list of expeditions. After 36 years in Peru, Woytkowski, by then an old and sick man, found that he could not qualify for a small pension from the Botanic Garden in Lima, because he never became a Peruvian citizen. He decided to return to his native Poland, now a different and strange country to him, where he suffered not only because of the cooler climate and conditions, but, as he wrote, "because I found myself in a situation in which I could be useful and constructive no longer." He died in Krakow, Poland, in 1966.

The English translation of the Polish text is good; numerous black and white photographs taken by the author illustrate the localities and people of Peru's seldom visited mountains and valleys. There are 6 charts of the areas explored in the years 1930–1964. The book is much more than a travelogue—it is the account of a naturalist's life and hardships and of a devotion to entomology that will appeal to professional and amateur collectors alike. The information will be of special interest to anyone concerned with the culture and the people of Peru. The author's insight and the description of problems encountered during his explorations might help future collectors.

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BOOK REVIEW

Ecological Methods, With Particular Reference to the Study of Insect Populations. T. R. E. Southwood. Second ed. Chapman & Hall-Halsted Press-John Wiley and Sons, New York. 524 pp. 1979. \$25.

The popularity of this book is evidenced by the fact that, after its publication in 1966 and reprinting in 1968, it has been reprinted in 1971, 1975 and 1976, before the present, revised edition first appeared in Cambridge, England in 1978. The reason for the popularity of this scholarly treatise can be found in the remarkable developments in the science of ecology. Ecologists need reliable quantitative data which this study contains. Written in a charming style, it gives a complete account of the theory and applications

of the subject. The chapters deal with the study of animal populations, the sampling, description of dispersion, absolute population estimates using marking techniques, sampling a unit of habitat, such as air, plants, plant products and vertebrate hosts, soil, litter and fresh-water habitats. Methods of population measurement, estimation of natality, mortality, and dispersal, are described in depth. Entomologists will be particularly interested in the discussion of age-grouping of insects, time-specific life tables and predictive population models. An author index and a general index are provided. Needless to say that this is a most useful book which will reward the individual reader and will also serve as a textbook. The book is technically excellent and its wide scope and lucidity make this new revised edition well worth having wherever ecological problems are being studied.

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BOOK REVIEW

Arthropod Phylogeny. A. P. Gupta, editor. Van Nostrand Reinhold. 762 pp. 1979. \$32.50.

This book provides a much needed up-to-date review of the growing body of information on the phylogeny of arthropods. Written by 13 scientists who have made many significant contributions to our knowledge of arthropods, this is a well organized, well illustrated, and clearly written book. The chapters deal with the morphology of fossil arthropods, early and late embryonic stages, abnormal metamorphosis, evolution of antennae and scent detection mechanism, eye structure, functional morphology and evolution of hexapods, arthropod visceral anatomy, intersegmental tendon system, sperm transfer and ultrastructure, neuroendocrine structures, and hemocytes. Several chapters are of special interest because of the well-organized and thorough treatment of their topics. Gupta's chapter on types of arthropod hemocytes in various arthropod groups and his penetrating analysis how they relate to arthropod phylogeny and evolution in general, as well as K. V. Clarke's presentation of the visceral anatomy and arthropod phylogeny are real masterpieces. Other topics are also treated exceedingly well. A taxonomic and a subject index are provided. I am convinced that the quality of this treatise will establish this book as a standard reference work and an essential addition to all scientific and biological libraries.

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